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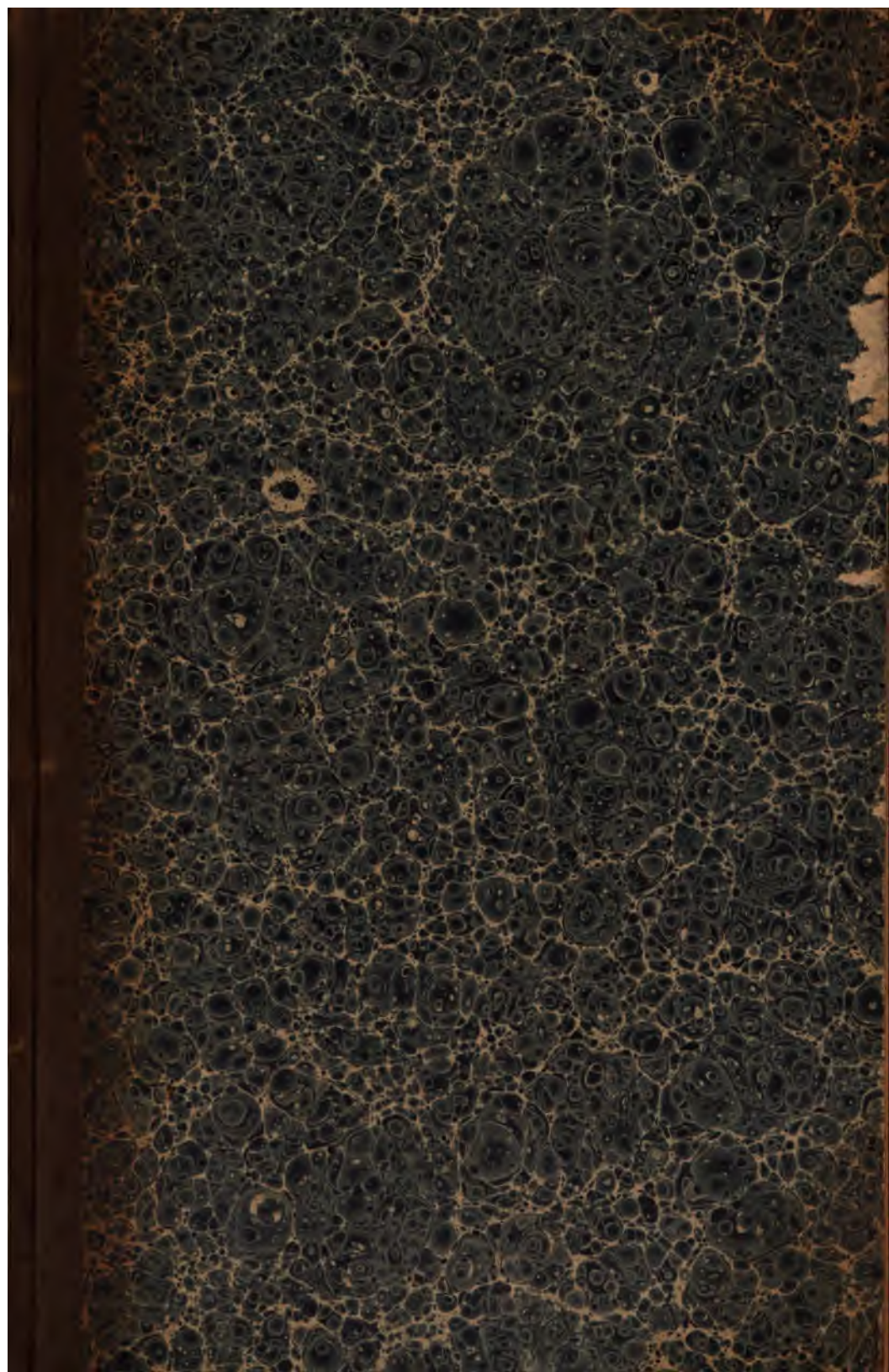
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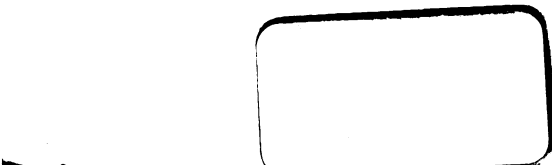


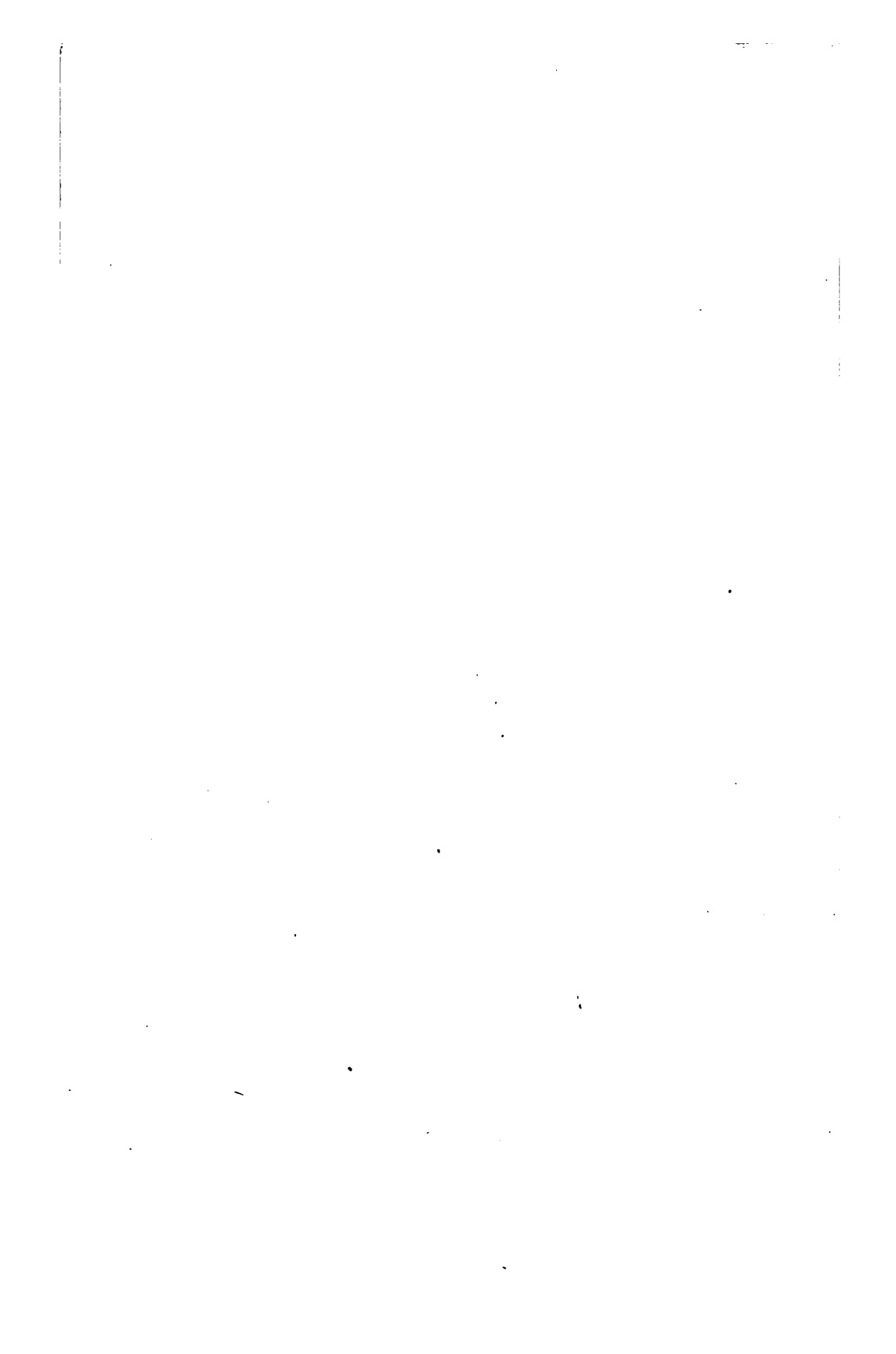
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STAMMERING,
AND OTHER
IMPERFECTIONS OF SPEECH,

TREATED BY
Surgical Operations on the Throat:

BEING
THE SUBSTANCE OF A PAPER READ BEFORE THE
WESTMINSTER MEDICAL SOCIETY,
MARCH 20th, 1841.

—◆—
BY
JAMES YEARSLEY, M.R.C.S.
AUTHOR OF "CONTRIBUTIONS TO AURAL SURGERY," AND SURGEON TO THE
INSTITUTION FOR CURING DISEASES OF THE EAR,
BACKVILLE STREET.



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TO THE MEMBERS
OF THE
WESTMINSTER MEDICAL SOCIETY,
IN
RETURN FOR THE HONOUR THEY DID THE AUTHOR, IN INVITING
HIM, THOUGH NOT A MEMBER, TO READ A PAPER
TO THEM ON THE SUBJECT OF
HIS DISCOVERY
FOR THE
RELIEF OF STAMMERING AND OTHER VOCAL IMPERFECTIONS
BY
SURGICAL OPERATIONS.

STAMMERING, &c.

THE different degrees of Stammering and vocal imperfections form a class of maladies so distressing, that no apology is required for publishing any safe and rational means by which they may be alleviated. Persons who suffer from these affections, however otherwise fitted by the possession of talent to elevate themselves in society, are almost inevitably restricted to subordinate situations. A confirmed stammerer is not only himself rendered miserable, and a source of painful feelings to his immediate circle of friends, but the distressing spectacle of his infirmity obtrudes itself upon all who come in contact with him. It has lately occurred to me to witness Stammering of a more aggravated character than any I had before conceived to exist; in some cases the defect has almost amounted to total dumbness, the effort to speak proving so painful and prolonged, that the sufferers have practised writing their thoughts instead of attempting oral communication. In extreme cases the miserable deprivation has preyed on minds at all sensitive so deeply, as to produce a melancholy condition bordering on insanity. Many have confessed to me that they have often felt urged to the commission of suicide by brooding over their unhappy condition, and have withdrawn from all companionship to weep that their thoughts should be constantly anticipated and spoken by others before they could give them utterance.

My attention became directed to Stammering, and the mode in which it may be relieved, during the course of an extensive practice in diseases of the ear. Within the last few years some thousands of patients suffering from deafness have passed under my treatment. In every case it has been a practice with me to examine minutely the appearances presented by the mouth and throat: by proceeding in this manner I have very frequently discovered a diseased condition of the mucous membrane, with more or less enlargement of the uvula and tonsils. Such cases have always claimed particular notice from the great difficulty with which they are relieved by the ordinary means. Often have I found considerable deafness with distressing tinnitus aurium, when there existed no other objective symptom than an irritable state of the mucous membrane of the throat. This state of the mucous membrane in deafness has been cursorily mentioned by other writers, but its importance has never been sufficiently insisted on. As regards the tonsils, it should be observed that the deafness is not found in exact ratio with their increased growth as seen from the mouth, but rather with their hardness and extension upwards between the arches of the fauces, so as to compress the guttural extremity of the Eustachian tube. When deafness, accompanied by morbid alterations in the throat, has proved intractable under the usual remedies, it has long been my custom to excise portions of the uvula and tonsils, if either have presented increase of size. This treatment has generally had the effect of removing or alleviating the ear malady; but in such patients I have frequently found, superadded to the deafness, a certain degree of thickened speech, the voice being muffled, and rapid utterance impeded; conditions which are immediately corrected by the removal of the cause in the enlarged tonsils. I performed my first operation, specially for the improvement of the voice, in July, 1840. A gentleman, in some degree suffering from deafness, applied to me with tonsils of surprising

growth and hardness. In this case the voice was thick, nasal, and imperfect, evidently owing to the impediment presented by the diseased tonsils. The removal of these glands with the knife occasioned an immediate improvement in the tone and compass of the voice, which continued to grow clearer as long as I had an opportunity of observing the case.

From this time a new and interesting branch of practice opened itself to me; I found that the most varied affections of the voice and respiration may be produced by enlargement of the tonsils. In children especially, I have witnessed cases where for many years the voice had been thick and choking, swallowing greatly impeded, and the breathing so much obstructed as to occasion a habit of carrying the mouth open. During sleep the respiration is in such cases still more disturbed; a moaning noise is constantly present, accompanied by sudden startings, as if from danger of strangulation. All these troublesome and serious symptoms are with certainty removed by excising the tonsils, and giving freedom to the throat. In adults, the effects of this disease are somewhat different, and chiefly evident in a thick and drawling quality of the voice; a person thus situated always talks as if the back part of the throat and nose were plugged up, which is in fact the case. One of the minor miseries to which patients with these morbid growths are frequently subjected is the necessity of returning the morsel to the mouth to be remasticated before it can be received into the pharynx. We might expect, *à priori*, that persons accustomed to try the organs of articulation by public speaking would be most prone to these affections; and from very extended observations, I am convinced that a large number of clergymen and public speakers have the voice deteriorated by diseased growth of the tonsils. The larynx has usually been looked upon as the seat of these affections; but I feel impressed with a certainty that they may with greater justice be referred to the throat.

Early in December, two patients were under treatment for deafness at the Ear Institution, and in both cases I removed increased growths from the throat with the effect of improving the hearing; and it could not but make a deep impression on me to learn shortly afterwards that not only had the ear affection diminished, but that both were entirely freed from Stammering, which had affected them from infancy. In neither of these cases was the stammering very remarkable; but the bare fact of its removal after the operations I performed, was sufficient to lead me to consider how far the same treatment might be successful in cases of a more inveterate character. With this view, I lost no time in seeking out cases of stammering and imperfect speech uncomplicated with deafness. One of the earliest cases upon which I operated was a respectable young man, named Butler, living at 14, Tottenham-street, Tottenham Court-road. I give a narrative of this case here because the operation was witnessed by some of the members of the Westminster Medical Society. This patient is twenty-four years of age; his stammer had existed sixteen years, and was invariably aggravated by easterly winds or wet weather. The impediment was, in this case, most severe and painful to witness; he frequently felt himself impelled to strike his hand forcibly against his side to assist the vocal effort; he rarely spoke without ducking his head forward so as to bring it nearly to a right angle with his chest. I removed the uvula, and the relief was instantaneous. Upon asking him how he felt, he raised his head and answered, "Pretty well, sir." After a moment's surprise at the readiness with which these words escaped him, he sprang up from the chair, exclaiming, "Oh, sir, I feel I can hammer away now." He talked afterwards with the gentlemen present without difficulty, and with only the most trifling hesitation. A few days after the operation, he received intelligence of the dangerous state of a near relative, which deeply affected him, and, for a time, occasioned a slight return of the impediment; but this speedily passed away, and

he may now be pronounced quite free from his former malady.

Several hundred persons, affected with every variety and degree of stammering, have passed under my notice; and I have carefully collected the following facts relating to this affection:—

A large majority present morbid conditions of the uvula and tonsils.

All stammerers are short-breathed. The cavity of the chest is contracted. They are incapable of inflating the lungs to anything like the normal capacity. In order to put this to the test of experiment, I directed twenty patients, selected indiscriminately, to take a full inspiration, and permit the breath to pass out slowly, and with an uniform and continuous singing sound. The greater number had exhausted the breath in from five to ten seconds; two only could hold out fifteen seconds. A healthy person can do so forty-five seconds. Another test was adopted, namely, to count out the breath; scarcely one could count thirty, whilst most persons can reach eighty.

Many stammerers have the tongue of large volume, and lying farther back in the mouth than natural. When at rest from talking, they usually keep the tip of the tongue some little distance behind the teeth, instead of allowing it to touch them, as is commonly the case in those who are free from impediment.

The anterior palatine arches are frequently very strongly marked, appearing to brace the tongue at its sides very firmly. The posterior arches present some remarkable features: they generally come down too near the base of the tongue, and are extended backwards; though, in one or two instances, they have come so far forward as to leave a considerable cavity between them and the back of the pharynx. In these cases the stuttering sound is naso-pharyngeal, and seems to ascend behind the palate, instead of coming forward between the teeth.

Among all the cases that have come before me I have never seen one where the patient could not easily touch the

palate with the tip of the tongue while the mouth continued half open; no person can do it when quite open.

All inveterate stammerers suffer from straining or pain within the chest or abdomen.

In proceeding to maintain the safety and success of the operations proposed, I may state that no accident has occurred to me in their performance. In only one case was the bleeding of sufficient importance to require any interference; and, in this instance, not the slightest difficulty was experienced in restraining it. The only novelty to which I lay claim is the promulgation of the facts, that, *in the great majority of stammerers, the tonsils and uvula are in a diseased state, and may be removed with advantage, and that these operations may in particular be applied to the relief of stammering and imperfect speech.* It may be asked how it is that diseased conditions of the throat, associated with stammering, should so long have escaped observation? It may be accounted for by the fact, that the only persons who see large numbers of stammerers are *not* surgeons, but teachers of elocution, who, if they did happen to forget their favorite theory of *nervous influence*, and look into the throats of their *pupils*, would be incapable of detecting any malformation congenital or morbid. One of the most celebrated of this class, who came to witness my operations, acknowledged his entire ignorance of either tonsils or uvula.

All the best surgeons of modern times have sanctioned the extirpation of the tonsils in certain cases, though it has never been of frequent performance, as it deserves to become. Hitherto it has rarely been executed, except when the tonsils, from their enormous size, have interfered with deglutition and respiration, in which case they are often the source of extreme danger. Sir Astley Cooper practised and recommended excision. Sir Charles Bell inclines to the use of the ligature. I believe this mode to be altogether objectionable, and I am surprised that so high an authority should sanction such unsurgical treatment. In practised hands the operation with the knife is

but the work of a moment. The pain is trifling, from the callous and insensible nature of the morbid growth. There is no hæmorrhage that can possibly prove troublesome, and the wound speedily heals; while, in the removal by ligature, much time is required to cut through the tumour, and the patient is kept many days with an offensive fetor in his mouth. In a recent work, professedly written in favour of the ligature, the author, with a singular inconsistency, nullifies his own recommendation by acknowledging, in the only case cited, that after the trouble of applying it on the tonsil, he was obliged to have recourse to the knife in consequence of the inflammation and other inconveniences occasioned by the presence of the ligature.

Various instruments have been invented, remarkable for their ingenuity, but altogether useless and inapplicable in practice. The best of these is the guillotine knife, but, even from the manufactory of Weiss & Son, it is a clumsy and uncertain instrument. To that surgeon, therefore, who has not sufficient confidence in his operative skill to wield the scalpel, I would say, Do not attempt excision of the tonsils! The rage for substituting mechanical for manual dexterity is much to be lamented.

When engaged in general practice, and not as at present, limited to purely operative surgery, I very well remember that while any capital operation would have been hailed as a stepping-stone to operative reputation, I should have shrunk from excision of the tonsils, with a vague apprehension of the fatal consequences which surgical records have shewn to sometimes follow puncture of the tonsil glands in *cynanche tonsillaris*, and other dangerous affections of the throat. From the number of patients now sent me by surgeons from various parts of the kingdom for excision of the tonsils, I have reason to believe that the same feeling prevails almost universally with respect to this operation. Very recently a case came before me which strongly confirms the opinion I entertain. The patient, a boy about fourteen years of age, had suffered for some years from tonsillary enlargements; deglutition, respiration,

speech, and hearing, were all obstructed to a very painful degree. He had been previously placed under one of the leading surgeons of London, who had been using caustic applications for upwards of four months with no other effect than to increase his sufferings. The removal of the tonsils by excision was accompanied by rapid relief to all the impeded functions. The tonsils in this case were of enormous size, but so completely insensible as to occasion *no pain* in removing them. After their loss the patient was able to swallow, breathe, talk, and hear with freedom, when compared with the previous difficulty. Not only had these important functions been interfered with for years, but this youth had, as we might expect, a troublesome predisposition to sore throat and catarrhal affections. The father informed me that for two years, when probably a chronic inflammatory condition of the lining membrane of the pharynx co-existed with the enlargements, the bedside of the poor boy could never be left from constant dread of suffocation.

I may state, that during my pupillage at the Gloucester County Hospital, containing 170 beds, where the surgeons were at that time second to none in operative skill, and subsequently in several years of attendance at the hospitals of London and Paris, though I followed on the steps of Abernethy, Dupuytren and Roux, I never witnessed excision of the tonsils. I am well aware the operation was recommended and practised by these eminent surgeons, but I only mention the fact to shew that it was of infrequent occurrence.

Other means besides excision have been used to remove the diseased growth of the tonsils, but with very questionable success. Dr. Hodgkin, in his work on Mucous Membranes, expresses himself very decidedly in favour of the operation by the knife. He says, "attempts are often made to reduce the size of tonsils thus affected by the application of various astringents, and lunar caustic in particular has been strongly recommended; but I believe

that the benefit derived from such measures is in most instances rendered imperfect by the deposition and consequent change of structure which inflammation has occasioned. In cases of the greatest apparent success, the relief may be merely transient. I have, therefore, no hesitation in giving decided preference to the method of excision as that which affords, with little trouble, a permanent and effectual remedy, and, at the same time, removes much of the probability of their relapsing into an inflamed state, to which they are very liable. It also renders of comparatively little importance the recurrence of inflammation, should it take place."

With respect to the division of the uvula, either a knife or scissors has been used. In my own practice, I invariably prefer a pair of curved scissors, and have never observed any ill results follow the operation. Dr. Bennati, who has practised the removal of the uvula, objects to it, on the ground that, after its performance, persons are more prone to become affected with sore throat. If this were the case, we might expect the same results to follow excision of the tonsils, which I have not only failed to observe, but have believed, with Dr. Hodgkin, that their removal lessens the tendency to inflammation about the throat. Probably, as Dr. Bennati practised excision of the uvula chiefly on professional singers, it was in consequence of his removing *a portion* only of the uvula that he noticed the bad results he describes. I have assured myself of a singular fact, that much greater pain and constitutional disturbance attends the division of the uvula at its point than its entire excision. In many cases where I have removed a part of the uvula, soreness and swelling of the divided extremity and inflammation of the palate and throat have occurred to some extent, while no such results have followed in any of the numerous cases where I have removed it altogether. Whenever the stump of the uvula has been irritable or painful, I have found nitrate of silver the best application.

It will be asked, what are the uses of the tonsils and

uvula in the animal economy, and what ill results may we expect to follow the loss of these structures? In regard to the tonsils, their chief use, without doubt, is to lubricate the morsels of food as they pass the fauces, and thus contribute to the facility of deglutition. This function of the tonsils is greatly increased in some of the reptile classes, who are able to swallow bodies of a size greatly disproportionate to the volume of the throat and œsophagus. In the human subject, these glands are frequently so small as to be scarcely perceptible on looking into the pharynx. It must be remembered, that I never practise excision of the tonsils when they present a natural appearance. I invariably limit myself to the removal of enlargements of them occasioned by disease; so that the operation cannot be said to produce bad effects by interfering with their healthy functions; while, on the other hand, I believe the removal of diseased tonsils, when no stammer is present, destroys a most prolific soil for the production of quinsy and other descriptions of sore throat, besides improving the voice in clearness, and taking away the obstruction to swallowing and respiration, which must necessarily attend their enlargement.

The uvula performs no other known office than to assist in separating the nasal cavities from the throat at the moment of swallowing, vomiting, &c. In cases where the nasal bones have been destroyed by disease, so that the uvula could be observed, it has been seen to move during the articulation of words. Professor Müller states, that the soft palate and uvula are raised during the production of the higher notes in singing. It is a curious circumstance, and probably connected with this observation of Müller, that, after the perfect excision of the uvula, singers are able to ascend two or three notes higher in the musical scale than was possible before the operation. I have verified this in numerous cases, and the same effect follows the operation upon the tonsils, though to a less extent. I conceive that very many persons would be benefited by the

absence of the uvula. In a large number it is relaxed and elongated, occasioning a constant tickling cough, and frequent attempts to get rid of the annoyance by swallowing. A gentleman, thus affected, consulted me some months ago, who had suffered from this kind of cough *for twenty years*: in his case the uvula was relaxed and tumid; its removal was followed by the immediate disappearance of the cough, which had so long remained unrelieved. He assured me he had used a hogshead of gargles. This relaxed state is produced by the frequent recurrence of catarrhal affections, in a climate where we are so much exposed to atmospheric changes, and vicissitudes of weather. Derangements of stomach are another prolific source of this annoyance. It is the opinion of the most eminent physicians that consumption and other pulmonary disorders are often caused by the irritable uvula hanging down in the throat, so as to occasion a troublesome cough, and thus exciting disease of the organs of respiration, just as in various mechanical occupations, needle-pointers, stone-cutters, &c., tubercular diseases of the lungs are developed by the constant dry cough produced by the irritation of particles of dust in the throat and upper part of the larynx.

I now approach a confessedly difficult part of the subject, namely, the essential cause of Stammering, and the mode in which the operations I have proposed effect a cure.

It has appeared to me, that in the great majority of stammerers the *isthmus faucium* (or opening from the mouth to the throat) has been of much less size than in the natural condition; the tongue generally of increased volume, particularly at its dorsum, and extending farther back than in the normal state; and the tonsils frequently so much enlarged that the base of the palato-glossal arch is completely lost in the encroachment of the tonsil upon its site. But the most constant changes occur in the uvula, or in the posterior palatine arches. The uvula is thickened or elongated, so as frequently to drag on the upper surface of the tongue. The pharyngo-palatine arch is often attached to

the side of the uvula, much lower down towards its point than natural, giving the veil of the palate a webbed appearance, and bringing it towards the dorsum of the tongue. It is known, that, by an effort of volition, these parts may be placed in apposition, so as to make the division between the mouth and throat complete. By approximating the posterior-palatine arches, and pressing the tongue upwards against them, the mouth may be entirely cut off from the larynx. I have often, when examining the mouths of stammerers, seen this state occur *spasmodically* from the different motions of the tongue. I have had instances when, after the removal of the uvula, the patient has referred the obstruction to the sides of the throat, pointing externally to the positions of the tonsils, and, when one of these has been excised, has still pointed to the seat of the other as the source of the remaining impediment.

Dr. Arnott believed that in stammering there was spasmodic closure of the glottis. In confirmation of this view, the voice of a stammerer has been compared to the escape of fluid from a bottle with a long and narrow neck, which either comes by jerks or not at all. As a more apt illustration, I would suggest its greater resemblance to liquid flowing from a bottle having a broken cork in its neck. I have been informed that Dr. Arnott does not at present entertain this opinion. Another great authority, Dr. Marshall Hall, refers much of the difficulty to the organs of articulation, especially to the lips, which certainly appear in many cases as if glued together during the attempt to speak. If either of these be the true source of stammering, we cannot, in the present state of our knowledge, satisfactorily account for its frequent disappearance after the operations I have devised. I must confess I have treated some intelligent persons, who themselves believed the sole cause to lie in the spasm of the lips, yet in these cases relief has often ensued on removal of the uvula and tonsils.

Will the spasmodic closure of the fauces, by the obliteration of the isthmus, account for the singular phenomena

of stammering? There are many circumstances which certainly seem to favour such an opinion. In the worst cases of stammering, I have observed that during the attempt to speak they can in a moment part the lips if they are content to do so, without the utterance of sound. Stammerers are able to sing, which I conceive to be owing to the open state of the throat in singing, and they can also talk or recite if they will use *the singing voice*. Moreover, the muscular movements of a confirmed stammerer are such as we might expect to find in an obstruction to a canal lined with mucous membrane. It is well known that in the muscular spasms which occur in hernia, coughing, sneezing, vomiting, &c., the phenomena are only to be explained by referring them to the reflex action produced by obstruction or irritation in a mucous tract, and having for its object the removal of the impediment. Let us apply this principle to the explanation of stammering. The sufferer attempts to speak, is unable to do so, possibly from stricture of the fauces, and forthwith all the respiratory muscles are thrown into violent action. The face is contorted, the shoulders raised, the abdominal muscles act forcibly in attempting to raise the diaphragm, and the rectus muscle has been even said to have been ruptured by the violence of the exertion. If the attempt to speak prove ineffectual, the whole body is convulsed, violent pains are felt in the chest, and the effort is obliged to be relinquished. It is in these cases, violent as they are, that the most marked improvement is occasioned by operative means. May not the spasmodic action of the lips, evident in some cases, be considered as a part of the action excited by the shutting up of the fauces, rather than as being itself the cause of stammering?

I am far from considering what I have here advanced as distinctly proved; but notwithstanding the various reasons that have been urged in opposition to my views, I am still of opinion that in stammering the impediment is seated chiefly, if not entirely, in the fauces. The fact that great

relief is in many cases afforded by enlarging the *isthmus faucium*, has been witnessed by too many disinterested professional men to admit a doubt of its correctness*. Some have explained the good effect of the operation by supposing that it produces a change in the nervous energy of the vocal organs, or that it acts by producing a powerful impression upon the mind. I am at a loss to conceive how some of the operations I have performed, and which have been followed by immediate benefit, should have effected this by merely altering the condition of the nervous influence, especially as some of the most successful operations have been attended by scarcely any pain; and, besides this, many cases have not only improved directly upon the operation, but have continued to mend progressively up to the present time. The greatest and most permanent benefit has been noticed in very obstinate cases, where the stammer was constantly present, and extended to almost every variety of sound.

I do not take upon myself to deny that Professor Dieffenbach's operations upon the tongue may act as he supposes, by modifying the innervation of the parts; but I can account for the results of the most successful of his admitted dangerous and severe methods *on my principle*, by the circumstance that the removal of a wedge-shaped portion from the whole width of the back of the tongue, must necessarily increase the area of the fauces, and in some cases, perhaps, more effectually than by operating on the uvula, tonsils, or soft palate. It seems to me confirmatory of this explanation, that a simple section of the tongue, carried through its whole length and thickness, except its investing membrane, does not produce an equal amount of benefit.

In support of the view that stammering is entirely dependent on nervous influence, and not as I have maintained on the joint agency of nervous and mechanical impediments

* More than 300 medical men, including many of the *élite* of the profession, have witnessed my operations.

re-acting one upon the other, it has been asked, Why do drunken men stammer? Is it in their cases stammering? I consider the imperfect voice of a man intoxicated as more allied in character and cause to the mumbling of an apoplectic patient, or the imperfect control possessed over the organs of articulation in extreme age or typhoid fever, than to true stammering. One bad stammerer, whom I relieved, assured me that when tipsy his impediment always disappeared.

It has been advanced that spasmodic or constant constriction of the throat, excited by the presence of enlarged tonsils, uvula, &c., cannot be the cause of stammering, because these enlargements so frequently exist without inducing such a concomitant defect. May not their presence excite disordered action in one case and not in another, just as worms in the intestinal canal shall in some instances, or at certain times, occasion convulsions, while in others no such results ensue; the different results from the same cause depending on difference of temperament and other agencies?

Stammering has been referred to the state of the frænum linguæ and the lingual muscles; but were it produced by immobility of the tongue from contractions of the muscles, the cause would be constantly in operation; whereas in stammering the words can at times be formed perfectly; but the *material* to form them in a continuous flow seems to be wanting; the difficulty occurs *antecedently* to the modulation of sound by the organs of speech, and consists, as I conceive, in the impossibility of sound passing from the glottis to the mouth at the moment when closure of the throat exists. Dr. A. T. Thomson believes that much of the difficulty resides in lingual contractions. He has stated that he had never seen a stammerer who could touch the palate with the tip of the tongue while the mouth remained open. In disproof of this assertion I can affirm, that, of two hundred whom I have examined, not one presented the difficulty he has mentioned. When the tongue is at all bound down by the frænum, there may be a diffi-

culty to enunciate a particular letter, as "r" or "th," which has sometimes disappeared after division of the frænum. This very day I have instantaneously enabled a gentleman to pronounce the letter "r," without the slightest difficulty, by division of the frænum :—

"Around the rugged rocks the ragged rascals ran"—

remained no longer an impossibility, after the performance of this painless operation. I should, however, never think of dividing the frænum *with the intention of curing stammering*. I believe, that if performed to any extent it would allow the tongue to go farther back into the throat, and thus increase the impediment. The case which happened in the practice of the celebrated French surgeon, Petit, may be instanced, in which, after division of the frænum, the tongue rolled back into the throat, and actually killed the patient by suffocation.

It has been objected to my operation, that I have not pointed out the particular forms of stammering to which it is applicable. I do not believe it is possible to classify stammering with any exactness, the apparently varying forms being only different grades of the same affection running into each other; but this does not affect the propriety of attempting to remedy malformation of the throat, whenever it is observed.

Considerable discrimination is necessary to distinguish the parts which should be removed, and to what extent. In every case that comes before me, I endeavour to bring former experience to bear upon it, removing, as I see occasion, the whole or part of the uvula or tonsils, taking a small portion out of the pendulous palate, or making sections of the palatine arches on either side.

Probably there is no other surgeon in existence who has so extensively performed the operation of excision of the tonsils as myself. In the last twelve months only, on reference to my case book, I find I have performed the opera-

tion either for the treatment of deafness or stammering, in more than four hundred cases.

I have operated for almost every description of stammering, being deterred in those cases only where the stammer has been slight or trivial. It may be presupposed, that, if the operations have any value, their good effects would be most apparent in very aggravated cases, where the stammer is continually present and comes into operation at nearly every word. Such is really the case. In many, where there had existed an impediment almost equivalent to dumbness, the greatest immediate relief has been perceptible. I may say, without exaggeration, that some patients have sat down before me *dumb*, and, after the operation, have gone away speaking freely.

In proof of the permanency of the relief afforded, I can state, that those longest operated on are most advanced towards a perfect cure. The most intractable variety of stammering, and upon which the operations prove least effectual, in the first instance at least, is a silent kind of impediment, where the sufferer goes on attempting to speak, without making any noise or visible attempt to articulate. These are comparatively rare cases, not more than three or four having occurred in two hundred.

The infrequency of stammering among women is very remarkable, and seems scarcely to admit of explanation. The statistics of my own practice accord very nearly with those of Colombat, being about five per cent. Several of the females who have applied to me have been relieved by the operation, as will be seen from the cases detailed.

The supposed nervous character of stammering I believe to be most erroneous. Before a proper appreciation of the results of obstruction of the Eustachian tube, three fourths of all kinds of deafness were denominated *nervous*, from the ignorance which prevailed of any more obvious cause for the malady. I apprehend the idea of *nervous stammering* to be almost equally unfounded. How much more rational and allied to truth would it

be, to consider the *nervousness as an effect* of the infirmity, whether deafness, stammering, or any other human malady, rather than *the cause*! I fear the vague theory of *nervousness, nervous irritability*, or by whatever name it may be denominated, has proved a sad drawback to the advancement of medical science.

In conclusion, I cannot but express my regret at having been, in some measure, hurried prematurely into the publication of my views, in consequence of the appearance in the professional journals of an account of another operation for the cure of stammering, of a totally different character and on a totally different principle to that of which I have treated in the foregoing pages. I must confess I was somewhat taken by surprise when the Memoir of Professor Dieffenbach appeared. I had been aware of my principal facts for two months previously, and was silently endeavouring to bring the subject to maturity. Professor Dieffenbach states, that he performed his first operation *upon the tongue, January 7th, 1841*; while I had performed mine *upon the throat, as early as December 5th, 1840*.

Since the publication of the first edition, I have spared neither pains nor expense to ascertain the precise results of my operations. Their immediate good effects have, in the majority of cases, been most gratifying and decided. But I have of course been aware from the first, that the seemingly marvellous circumstance of affording this instantaneous relief, would suggest to many cautious minds a doubt of its permanency. Such scepticism is in itself perfectly natural, because I allow that the excision of enlarged tonsils or uvula, or my operations on the palatine arches, seem inadequate to cure a malady hitherto so intractable as stammering. However, being myself fully impressed with the belief that I have enriched the domain of surgery with an important acquisition, and looking at its ultimate utility to

mankind, I have felt most anxious to follow out the results in every case, when practicable, in order to add the evidence of the subsequent condition of patients to the immediate change effected by the operation ; and to prove also, that no ill consequences to the tone of the voice, or the facility of deglutition, had ensued.

To this end, not only have the circumstances immediately attendant on the operation been carefully noted, but the progress of each case has been recorded to the present time, whether favorable or otherwise. As a conclusive measure, and, if possible, to place the subject beyond the reach of cavil or doubt, a printed circular has been addressed to every patient, and the information derived from the answers is appended in a tabular form. Altogether, the operations extend over a space of four months, that is, from the first week in December, 1840, to the end of March, 1841. During that period, two hundred and fifty operations were performed in public and private practice.

The reader must not suffer himself to be prejudiced against the operation because it is not uniformly successful. I feel happy in having effected a large amount of good without the infliction either of evil, danger, or considerable pain, even to those few who are not benefited by my treatment. The operations are, in my own hands, and I doubt not will prove, when carefully conducted by others, as uniformly successful as many of the most valued in surgery, or the most trusted specifics in medicine. When incautiously or unskilfully performed, mischief and ill success may ensue ; already more than one patient has applied for my assistance with the operation half performed, giving the name of some reputed operator, together with a detail of unnecessary suffering. Surely neither myself nor the operation ought to be held responsible for such mal-praxis.

As far as concerns the imaginary ill effects produced on the tone of voice and movements of the throat in swallowing, I may state that not a single accident or inconvenience has come under my notice, though I have constantly been on

the watch, and must have observed them, were it possible that such could occur from its proper performance. *I have proved beyond a doubt, that the uvula may in all of us be removed with impunity, and in most persons, with evident advantage; that, in fact, its entire absence is attended by no inconvenience whatever.*

The propriety of the removal of enlarged tonsils of course cannot be disputed.

The discovery of the fact that the uvula may be removed without subsequent inconvenience is of the deepest interest to the lovers of song, for many of my patients endowed with a musical ear, to whom relief has been afforded by the operation, have discovered that the tone and compass of the voice is thereby improved and increased. In numerous cases from one to three notes in the musical scale have been gained, and this augmented development of the voice in richness and volume does not take place, as supposed, in the falsetto, but in the natural register. So constant is this singular effect, that it will not be surprising if the removal of the uvula should come to be considered essential to a successful musical education.

During the present month, I have met with a much larger amount of success than previously. From having examined and operated on such a large number, I can now perceive any unnatural changes about the throat, and decide whether the uvula, tonsils, palatine arches, or pillars of the fauces be in fault, or whether all conjointly. Agreeably to this judgment is my knife employed, and experience enables me to predict the result with tolerably accurate precision.

CASES.

MEM.—W. LAIKIN, aged eighteen, apprentice at the Queen's Printing Office, had been affected with stammering from infancy. Any attempt to speak was accompanied by convulsive movements resembling *chorea*: in fact, five years ago, he had been treated for St. Vitus's dance, at St. Thomas's Hospital. There was no remission of the impediment: every attempt to articulate the most simple word was attended by great difficulty, sometimes so great as to render utterance impossible.

The tonsils and uvula were considerably enlarged, and the mucous membrane of the throat, generally, in a state of subacute inflammation.

March 9th. Removed the uvula and the enlargements from both tonsils: immediate and sensible improvement followed.

March 14th. The convulsive motions are entirely gone. His mother accompanied him, and states, that the first day after the operation, she was fearful no relief had been afforded; but every day since, she has been certain of a progressive improvement. All who have conversed with him have noticed the alteration. He can now utter words without hesitation, which before caused him great and painful exertion. He had suffered for two or three years from severe pain in the chest, which was sometimes so violent as to oblige him to lie down for several hours: he had been attended for it by Mr. Town, Surgeon of Kingsland. No pain has been felt in the chest since the operation.* He states, that his articulation has always been so imperfect, that he has been unable to learn to read; but now expresses his intention of immediately commencing to do so.

March 2nd. Up to this time, W. L. has continued to improve, and I have no fear of an ultimate cure.

* Scarcely without an exception, the straining, and frequently pain, experienced by stammerers in the chest, sides, or abdomen, is instantly relieved by the operation.

WILLIAM CHRISTMAS, Silversmith, aged twenty-one, residing at No. 52, King's-square, Goswell-road, had stammered from infancy. The impediment never intermitted: always struck the right arm against the ribs with considerable violence during the attempt to speak. At times, the exertion rendered the eyes blood-shot, and the face suffused. "Had often been two minutes and a half unable to utter a difficult word, or even obliged to relinquish the attempt." In this case, the impediment occurred chiefly at the labial or dental letters.

March 9th. Excised the uvula. An immediate loss of all the convulsive muscular action. He expressed himself as free from his impediment instantly and entirely; an imperfect command over the lips and tongue alone remaining.

March 14th. Has continued daily to improve since the operation. A friend, who came with him, stated, that the removal of the impediment has been strikingly evident to those acquainted with its previous extent, and who have since had an opportunity of observing him. This patient can, in singing, ascend a note and a half higher in the musical scale than he could before the operation.

April 30th. I have seen this young man several times since the last date, and there can be no doubt now of the permanent removal of the impediment.

JOHN BURROUGHS, aged twenty-one, 23, Wellealey-street, Euston-square, stammered from infancy. Had been growing worse for five years, until the last year, when the impediment slightly diminished. Depression of spirits always increased the difficulty. Had the greatest hesitation in pronouncing words beginning with "b," or "c" hard. Had violent motions of the arms and legs, in attempting to speak; the lower jaw sometimes depressed with such violence as to occasion great pain. Often experienced pain at the epigastrium and under the sternum. Had at intervals attacks of difficulty of breathing, threatening suffocation, for which bleeding and blistering had been tried in vain. The exertions to speak were so violent as to cause profuse perspiration and great feebleness. Had sat down frequently and cried at his inability to talk, and had frequently contemplated suicide.

March 12th. The uvula and tonsils were removed. He could speak words without hesitation the instant after the operation, which before and all his life had been attended by great stammering and contortion. This patient, at finding the curse of his life removed, wept for joy. Another sufferer was present, hesitating whether or not he should submit to the operation; seeing which, Burroughs told him to go down on his knees and pray that it might be performed directly.

March 16th. The improvement has continued unabated up to this time. Has not had any difficulty of breathing, pain, or hesitation of speech since the performance of the operation.

April 28th. Up to this time J. B. continues quite well.

ROBERT CRAWLEY, aged twenty-seven, factory porter, in the employment of the firm of Mortimer & Hunt, the eminent silversmiths of Bond-street. The speech of this patient had always been imperfect. At four years of age he was unable to articulate a single word. When he did begin to talk, it was in a dreadfully stammering manner, which continued to increase as he grew older, and was, at the time he presented himself in Sackville-street, of a most painful and aggravated character. During his childhood his friends had placed him under various teachers of stammerers, who had all failed to afford any relief to the impediment.

On examining the throat, I found both tonsils and the uvula in an enlarged state. I immediately removed the uvula and the tonsil of the right side, which produced an almost miraculous relief. He expressed himself as free from the impediment. On a subsequent visit, he informed me, that being aware of the decided opposition of his parents to his undergoing any operation, he had determined to say nothing to them until after its performance. Upon his return home, the day of the operation, he had occasion to speak to a younger brother, a lad about fifteen years of age, who, after looking very earnestly at him for a few seconds, ran to his mother, exclaiming, "Mother, how well our Bob speaks!" This alone would be sufficient to shew the relief afforded in the case; but he tells me, that all who have come in contact with him have noticed the remarkable improvement.

March 30th. Up to this present time this case has gone on most favourably; nothing can be more delightful than the ease with which he now speaks, as compared with his former difficulty.

April 25th. Reports himself cured.

March 22nd. FREDERICK SHIPTON, 1, Providence Place, Shepherd's Bush, aged 18. Had stammered considerably from childhood. The impediment was not confined to particular words. Two or three years ago he acquired a habit of prefixing "osey" to all words of difficult utterance, whereby the stammer was considerably lessened; thus, on being asked his name, residence, occupation, &c., answers, "osey-Frederick Shipton," "osey-Providence Place," "osey-pot-boy." This peculiarity was of much use to him, but still he stammered badly.

In this case I removed the uvula, which was very much enlarged, and the posterior palatine arches. The improvement to the voice was immediately very decided.

March 28th. Reported himself as having improved daily from the time of the operation, and as needing his singular auxiliary much less than formerly.

April 4th and 11th. Continues to improve.

April 19th. Pronounces himself cured, and is certainly free from all impediment.

April 28th. Confirmed the statement of his cure by letter.

FREDERICK WEST, No. 1, St. James's-street, Cannon-street Road, St. George's East, aged 20, had stammered from childhood, sometimes so badly as not to be able to speak a word.

March 24th. Uvula removed with instant and surprising relief.

March 28th. Reports himself quite well. Has only felt hesitation at one word since the operation; this was "susceptibility," from which he instantly recovered himself. Works at a copper manufactory. Since the loss of the uvula he has noticed that an effluvium, which caused all the other workmen to cough violently, had no effect on him; previously he was more susceptible in this respect than the rest.

April 10th. No relapse whatever; has only stuttered *once*, at the *one word* mentioned above, since the operation. Considers himself cured.

April 29th. Five weeks after the operation, remains perfectly cured.

J. C. Esq., aged 33. Considerable stammer, with facial contortions, projection of the tongue, stamping of the foot, &c.

In this case the uvula was elongated, the tonsils enlarged, and the mucous membrane of the throat in an irritable condition.

Feb. 10. The uvula and enlarged tonsils were removed, giving little pain, and followed only by the most trifling hæmorrhage. The effect was immediate, both in the diminution of the stammer and the improved quality of the voice. The patient expressed himself so palpably relieved in the throat, the part to which he had always referred the impediment, as to express his conviction of his ultimate restoration.

March 20. The case has progressed favourably up to this time.

April 29. All convulsive actions were relieved (as is generally the case) at the time of the operation, and have not since returned, and the stammer is now nearly gone. I venture to predict that in another month my patient will be entirely and permanently cured.

March 1. Miss P., aged 26, came up from Yorkshire afflicted with a painful degree of stammer, so much so, as to oblige her to exclude herself from any society but her own immediate circle of friends.

Such words as *curiosity*, *memento*, *Lilliputian*, *street*, and particularly her own name, were almost insurmountable. The greatest pains and expense, under teachers of elocution, had been incurred, but no relief was obtained, although all had *promised* to cure.

She expressed herself certain that the difficulty existed in the throat, and my examination enabled me to confirm this impression, for the uvula was elongated, the tonsils enlarged, the posterior arches of the palate low, and the whole throat relaxed.

The necessary operations were performed; and from that time to this, the stammer has diminished, and at this date, May 2, may be said to be gone. Her health, which before was delicate, is much improved. From the moment of the operation, she was sensible that no physical obstacle remained, and that she had only to conquer the habit, which she has now accomplished.

HENRY JOHN BOWEN, age, 22, resides at 5, Bennett's-court, Drury-lane. Has stammered badly from early childhood. Stammer much aggravated by the presence of strangers.

March 9th. Uvula and enlarged tonsils removed.

" 18th. Reports, "considerable improvement:" states that he is able to hold conversation in his business, which he was quite incapable of doing before the operation. His master and mistress, and all who had seen him, were struck with the change.

April 4. Continues to improve. To give tone to the system, which was somewhat debilitated, quinine was prescribed.

May 2. Reports himself "nearly well."

JAMES BAILEY, 62, Newman-street, Oxford-street, upholsterer, had stammered from infancy, accompanied by convulsive movements of the body. So distressing was the infirmity as to make him regardless of life. About two years ago, he found that, by a nasal insufflation, he could manage to say words which before he altogether failed in doing; such as *captain*, *cork*, *cooper*, or words commencing with *t*, *b*, &c.

March 16. Removed uvula, with instant relief. On asking him how he felt after the operation, he answered me by saying "Cork, cooper. Oh, sir, it is all right."

This was a case in which instant cure followed the operation. He has not stammered since. There is no doubt that by the insufflation, he contrived to get the uvula out of the way of the throat, so as to admit the ready passage of breath to the mouth.

Feb. 19. Mr. S., aged 20, an embryo city merchant, had been afflicted with a most distressing stammer since six years of age, conse-

quent on an attack of scarlatina, which had left considerably enlarged tonsils.

Removed uvula and tonsils same day.

Feb. 23. Reports, "decided improvement."

„ 30. Improvement still more marked: considers himself nearly cured. The change of manner in my young patient is remarkable; once, retiring and timid—now, happy and confident. The unalloyed joy with which he starts forward to clasp my hand is gratifying in the extreme.

April 8. Not the slightest relapse up to this date. Is pronounced by his friends and himself *cured*.

RESULTS of TREATMENT in 204 Cases, occurring in Public and Private Practice, from December 5th, 1840, to March 31st, 1841:—

Cured	-	-	-	-	-	-	53
Much relieved	-	-	-	-	-	-	71
Relieved	-	-	-	-	-	-	82
No relief	-	-	-	-	-	-	48
							<hr/> 204 <hr/>

Many of the uncured cases are still under treatment, so that I look forward to a still more satisfactory result, as the ultimatum of my efforts. In many cases I have found that it is not sufficient to remove the physical difficulty or obstruction from the throat only, but that judicious medical and educational after-treatment is indispensable, more especially with children. Almost all patients immediately after the operation are sensible of the freedom they have gained in the throat, and are conscious that they have only the habit to surmount. It is obvious, therefore, that the observant and careful patient recovers more rapidly than the one not endued with these qualities.

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